The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A manufacturing method of a semiconductor device, comprising the steps of:

forming a gate electrode over a semiconductor substrate;

selectively injecting first impurities into the semiconductor substrate to form a first impurity region;

processing a first laser beam having a fundamental wave into a long beam on a surface of the first impurity region;

moving the surface of the first impurity region relatively to the long beam to scan the first laser beam to activate the first impurity region,

forming a sidewall on a side of the gate electrode after activating the first impurity region;

selectively injecting second impurities into the semiconductor substrate more deeply than the first impurities to form a second impurity region after forming the sidewall;

activating the second impurity region by a second laser beam,

wherein the first laser beam having a fundamental wave is oscillated with a pulse width of 1 femtosecond or more and 10 picoseconds or less.

2. (Previously Presented) A manufacturing method of a semiconductor device, comprising the steps of:

forming a gate insulating film over a semiconductor layer of an SOI substrate;

forming a gate electrode over the gate insulating film;

selectively injecting first impurities into the semiconductor layer of the SOI substrate to form a first impurity region;

processing a first laser beam having a fundamental wave into a long beam on a surface of the first impurity region; and

moving the surface of the first impurity region relatively to the long beam to scan the first laser beam to activate the first impurity region,

forming a sidewall on a side of the gate electrode after activating the first impurity region;

selectively injecting second impurities into the semiconductor layer of the SOI substrate more deeply than the first impurities to form a second impurity region after forming the sidewall;

activating the second impurity region by a second laser beam,

wherein the first laser beam having a fundamental wave is oscillated with a pulse width of 1 femtosecond or more and 10 picoseconds or less.

3. (Previously Presented) The manufacturing method of a semiconductor device according to claim 1 or 2, wherein the second impurity region is source and drain regions of a field effect transistor.

4. (Previously Presented) The manufacturing method of a semiconductor device according to claim 1 or 2, wherein the first impurity region is an extension region of a field effect transistor.

5. (Canceled)

6. (Previously Presented) The manufacturing method of a semiconductor device according to claim 1 or 2, wherein the first laser beam having a fundamental wave is emitted from one kind of lasers in which one or more of Nd, Yb, Cr, Ti, Ho and Er, is/are

added as a dopant into a crystal of Sapphire, YAG, ceramics YAG, ceramics Y_2O_3, KGW, KYW, Mg_2SiO_4, YLF, YVO_4, or $GdVO_4$.

7. (Previously Presented) The manufacturing method of a semiconductor device according to claim 1 or 2, wherein the first laser beam is pulsed laser light with a repetition rate of 10MHz or more.

8.-10. (Canceled)

11. (Previously Presented) The manufacturing method of a semiconductor device according to claim 1, wherein a peak output power of the first laser beam is $1GW/cm^2$ to $1TW/cm^2$.

12. (Previously Presented) The manufacturing method of a semiconductor device according to claim 2, wherein a peak output power of the first laser beam is $1GW/cm^2$ to $1TW/cm^2$.

13. (Previously Presented) The manufacturing method of a semiconductor device according to claim 1, wherein a wavelength band of the fundamental wave is from red ray to near-infrared ray.

14. (Previously Presented) The manufacturing method of a semiconductor device according to claim 2, wherein a wavelength band of the fundamental wave is from red ray to near-infrared ray.

15. (Previously Presented) The manufacturing method of a semiconductor device according to claim 2, wherein the second laser beam has an energy density of 0.1 to 1 J/cm^2.